

FYR Deeney Comment Letter 121214.docx

Scheer, Dave (MPCA) <dave.scheer@state.mn.us>

Fri 12/19/2014 11:18 AM

To:Evison, Leah <evison.leah@epa.gov>;

1 attachment (96 KB)

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Leah;

On page 3 of the attached letter, under 'Site Chronology' GMI has indicated that "The Chronology also should list the 2001 EPA Addendum to the second FYR (Oct. 24, 2001)." We do not have this document and it does not seem to be listed in previous FYRs. Do you have such a document?

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GENERAL MILLS

December 12, 2014

David Scheer
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Re: General Mills/Henkel Corporation Site
Draft Five-Year Review

Dear Mr. Scheer:

Thank you for the opportunity to provide comments on the Minnesota Pollution Control Agency's ("MPCA") draft Five-Year Review ("FYR") for the General Mills/Henkel Corporation Site (the "Site"). We understand you have provided both General Mills, Inc. and the Southeast Como Improvement Association ("SECIA") copies of the draft FYR for review. These comments are based on the draft we received on December 2, 2014.

As you know, the purpose of a five-year review is to evaluate the implementation and performance of a remedy to determine if the remedy is or will be protective of human health and the environment. Protectiveness is generally defined in the National Contingency Plan ("NCP") by the risk range and the hazard index ("HI"). Evaluation of the remedy and the determination of protectiveness should be based on and sufficiently supported by data and observations.

To assist MPCA in achieving the purpose of the FYR and to ensure the information contained in the FYR is accurate and factual, we offer these comments, beginning with general comments.

GENERAL COMMENTS

1. The draft FYR correctly states that the Remedial Action Plan ("RAP") appended to the Consent Order identifies the selected remedy to address VOC contaminants in groundwater. The RAP was modified in March, 2014 ("RAP Modification #1") to include not only the extensive subslab soil vapor investigation and mitigation system installation effort, but also to include requirements for soil, groundwater and soil gas investigation and monitoring activities and development of a Feasibility Study with respect to the potential vapor intrusion pathway. In September 2014, MPCA approved the Vapor Intrusion Pathway Investigation Work Plan (the "Work Plan"), which currently is being implemented. This Work Plan calls for extensive sampling and monitoring activities including sampling from 12 direct push boring locations, sampling from 13 existing monitoring and pump out wells plus installation and sampling from at least 38 new monitoring wells, and monitoring from a new sentinel vapor monitoring network that includes 30 vapor monitoring ports. The Executive Summary and Section VI of the draft FYR do not mention or adequately consider this information. Instead, the draft FYR inappropriately focuses on the 2012 Annual Monitoring Report, although the proposals for continued monitoring in that report were effectively replaced by the MPCA-approved Work Plan. The investigation and monitoring activities in the Work Plan bear directly on and render moot several of the recommendations in the draft FYR. In this same vein, the draft FYR repeatedly states that monitoring and well maintenance activities occur only every five years. This inaccurately reflects the status of Site response activities and the

Commented [DAS1]: Data utilized in this FYR was based on information of public record contained in the annual reports. We do not intend to work in progress, work proposed or in other words, work that is incomplete and for which conclusions are not derived and accepted by the regulatory authority.

remedy as stated in the modified RAP. The recommendations and findings of the FYR should more accurately reflect this more complete and current information.

Commented [DAS2]: While this work has been proposed and begun as referenced in WP, this was not part of the history of Annual Reports and was only recently enacted and has not been the actual history of activity at the site.

2. The draft FYR does not appropriately reflect uncertainties surrounding historic use of the on-site disposal area. The Executive Summary and Section III.3 present certain historic activities with greater certainty than is supported by the record. With regard to the time frame in which the disposal area activities occurred and the estimated volumes, it is more accurate to say it was estimated that the disposal area was used from approximately 1947 to 1962, and further, it was estimated that 1,000 gallons a year of waste was disposed there. These estimates, which date back to 1981, were based on very limited information, and early reports at the Site recognized that this may have been an over-estimation. It would be more accurate to say these timeframes and volumes were estimates, based on limited information available at the time.

Commented [DAS3]: We used the word "approximately," they prefer the word "estimated." Not a significant issue with regard to the accuracy of the document.

3. The draft FYR fails to mention the significant amount of data that demonstrate other sources in the area have been or are contributing to the contamination in the East Hennepin area. To sufficiently evaluate the protectiveness of the remedy, it is vital that this information be included in the FYR. Specifically, MPCA has prepared a CERCLA Pre-Screening Assessment (**Exhibit A**) that identifies several commercial properties upgradient of the General Mills site, including Anne Gendein Trust Property (VP13270), Northwest Warehouse (VP13100), AmeriPride Services – Minneapolis Services (VP13100) and the former Franks Auto Repair (LEAK#1126). MPCA's pre-screening assessment further states TCE was detected at a concentration of 3,600 ug/l in the groundwater at the Anne Gendein Trust Property, located at 359 Hoover Street, and at a concentration of 1,620 ug/l in the groundwater at the former Franks Auto Repair, located at 2314 East Hennepin Avenue. In addition, Barr Engineering's Phase 2G Investigation results showed significant levels of TCE in groundwater at several upgradient boring locations.¹ More recently, samples collected in October 2014 and December 2014 as part of the ongoing Vapor Intrusion Pathway Investigation show TCE in groundwater at levels up to 1,210 ug/l in five direct push boring locations on 23rd Ave. just south of East Hennepin and up to 1,940 ug/l in two other upgradient locations north of East Hennepin.² These sampling results show that significant TCE levels currently exist in groundwater upgradient of the Site and downgradient of the sources identified in MPCA's CERCLA pre-screening assessment. This demonstrates that significant upgradient sources of TCE exist that are impacting the Site and locations downgradient of it.

Commented [DAS4]: Disagree. The purpose of the FYR is to evaluate the protectiveness of the remedy not assess other properties.

MCPA must give adequate consideration to the presence of these significant, ongoing upgradient sources. The recent data shows higher levels of TCE upgradient of the Site than are found at locations downgradient of the Site. It is incumbent on MPCA to characterize the nature and extent of that contamination, which is not caused by, but is significantly impacting the locations downgradient of, the GMI Site.

Commented [DAS5]: Does this evaluate the protectiveness of the remedy? We don't have sufficient data to form firm conclusions at the time of the FYR. Plus, it is outside the scope of the FYR.

4. At several points in the draft FYR, including the Executive Summary, the report states "an increase in trichloroethylene (TCE) concentrations in recent sampling events indicates an increase in contaminant concentrations may be occurring."³ This statement is inaccurate and misleading with respect to Site conditions. Following shut down of the pump-out system in September 2010, no increase in TCE concentrations has been observed in a majority of the glacial drift wells. Potential increases have been observed in only three wells: pump-out wells 109, 110 and monitoring well V. In two of these wells (pump-out well 110 and monitoring well V), the observed change in TCE concentration is similar to short-term fluctuations observed when the pump-out system was operating. Further, in two of these wells (pump-out well 109 and monitoring well V), the apparent increase in concentration has stabilized or reversed. As noted on page 19 of the draft FYR, the concentrations in these wells remain below the applicable limits in the Consent Order. Moreover, the draft FYR acknowledges on page 24 that the

¹ See Summary of Phase 2G Investigation Report Results, Barr Engineering, Co., May 5, 2014.

² Reference e-mail from S. Gaffin, Barr Engineering to H Neve, MPCA, December 11, 2014.

³ This statement also appears on pages 19, 23, 24 and 29.

former absorption pit is not a continuing source of TCE in shallow groundwater. This reinforces the need for the FYR to recognize and discuss the existence and impact of upgradient sources. If an increase in TCE concentrations in fact is occurring, it likely is due to off-site sources rather than the former General Mills Site. Nevertheless, the report should clarify that TCE concentrations have generally been decreasing site-wide and to the extent there is an increase in concentrations, it is in limited locations and may be related to off-site sources rather than the former General Mills absorption pit.

SPECIFIC COMMENTS

Issues/Recommendations

We offer the following comments regarding the Issues/Recommendations contained in the Executive Summary:

Page v: The Site Name should be "General Mills/Henkel Corporation."

Issue 1: Repair of wells is recommended. Any needed repair work is being completed during implementation of the MPCA-approved Work Plan, rendering this recommendation moot. This should be made clear in the FYR.

Issues 2 and 3: Annual Long-Term Monitoring and Operation and Maintenance is recommended. The referenced five-year interval was based on 2012 Annual Monitoring Report, which was submitted prior to RAP Modification #1. The MPCA-approved Work Plan currently being implemented pursuant to RAP Modification #1 requires extensive groundwater monitoring and sampling. These activities address any potential issues relating to this recommendation, making it unnecessary and moot.

Issues 4 and 5: Evaluate remedial alternatives to meet RAOs established under Issue 5. The Work Plan calls for extensive groundwater monitoring at and near the Site, including installation of 30 sentinel vapor monitoring ports, 38 monitoring wells and sampling from 12 direct push borings in addition to the existing monitoring well network. As stated, this work currently is underway. Following completion of the sampling effort, the RAP Modification #1 calls for completion of a Feasibility Study. The draft FYR does not mention or otherwise recognize these ongoing efforts that render this recommendation unnecessary and moot.

Finally, we note generally that milestone dates in the Issues/Recommendations do not accurately reflect or account for existing Work Plan timelines or timelines for the Site response actions generally.

Site Chronology

GMI understands the 2004 Site Soil and Groundwater Restrictive Covenant was signed by MPCA and BBD Holdings, which owned the Site at the time. The covenant was not signed by GMI. The same error is found on page 12 of the draft FYR. GMI conducted soil gas survey and investigation activities from about April 2012 through October 2013.

To be complete, the Site Chronology should include the Vapor Intrusion Pathway Investigation Work Plan, which GMI submitted to MPCA in June 2014 and which MPCA approved in September 2014. The Work Plan is currently being implemented.

The Chronology also should list the 2001 EPA Addendum to the Second FYR (Oct. 24, 2001).

III. Background

Commented [DAS6]: Our comment is based on the trend of several wells. The nature of DNAPL to be present in the form of ganglia at certain locations is not uncommon and would only effect a select group of wells. We do have a documented release at this location and the release related to this site should be fully characterized. Site Assessment Unit can focus on the potential for other sources in the area.

Commented [DAS7]: See our response comment 2 above.

Commented [DAS8]: See our response comment 2 above.

Commented [DAS9]: See our response comment 2 above.

Commented [DAS10]: Again with the work plan.... See our response comment 2 above.

Commented [DAS11]: ok

Commented [DAS12]: Again with the WP? See our response comment 2 above.

Commented [DAS13]: ok

Page 4, Section III.3 As discussed above, the draft FYR does not appropriately reflect uncertainties surrounding historic use of the on-site disposal area. On June 9, 1981, General Mills submitted a Notification of Hazardous Waste Site, indicating it had received information that waste organics and waste solvents were disposed at the facility located at 2010 East Hennepin Avenue from approximately 1947 to 1962. It was estimated in the 1981 Notification that 1,000 gallons per year were disposed at the facility located at 2010 East Hennepin Avenue. This estimate was based on limited information available at the time, and the volumes likely were overestimated. No contemporaneous records have been found that specifically identify the substances or quantities disposed at the Site. It would be more accurate to word this section as follows:

The Site was primarily utilized as a technical research facility from 1930 to 1977. GMI primarily conducted food research at the site from 1940 to 1947. In 1947, GMI began chemical research at the Site. From approximately 1947 to 1962, a soil absorption pit was utilized to dispose of waste organics and solvents. The absorption pit located in the southeastern area of the Site was constructed of three perforated 55-gallon drums, stacked and buried to a depth of approximately 12 feet (ft) below ground surface (bgs). In 1981, General Mills estimated that approximately 1,000 gallons of waste organic and solvents were disposed of in the absorption pit each year during its operation.

General Mills notified the MPCA of the soil absorption pit location and the estimated disposal volumes at the site on or about June 12, 1981. Since 1981, GMI has cooperated with MPCA with regard to investigation, remediation, operation and maintenance of soil and groundwater contamination at and downgradient of the Site.

Page 4, Section III.4 – The Prairie du Chien Group is separated from the glacial drift aquifer by three confining units. This aquifer has been impacted by release of TCE from the TCAAP Site in Arden Hills. This information should be clarified in the FYR.

IV. Remedial Actions

Page 7, Section IV.1.1 – As stated above, GMI conducted soil gas investigation activities from April 2012 to October 2013. To more accurately reflect the status of this effort, the first paragraph should include the following information:

- The soil gas investigation confirmed the presence at some locations of TCE in soil gas.
- To date, subsurface vapor samples have been taken at 340 properties. Approximately 96 percent of the properties with greater than 20 ug/m3 TCE in subsurface have been mitigated.

Although this section of the draft FYR acknowledges the work being done under RAP Modification #1, Section IV.4 fails to consider that the issues raised in the 2011 and 2012 Annual Monitoring Reports are now addressed and effectively superseded by the Work Plan.

Page 13, Issue 1, 2009: The Restrictive Covenant was not signed by GMI. It was signed by BBD Holdings, which owned the property at 2010 East Hennepin at the time.

Page 14, Issue 5, 2014: It is not correct that groundwater monitoring is being done under the approved groundwater monitoring plan. Groundwater monitoring is currently being conducted under the MPCA-approved Work Plan dated August 2014.

Page 15, Issue 10, 2014: It is more accurate to state that GMI is currently performing soil, soil gas and groundwater investigation and monitoring pursuant to the Vapor Intrusion Pathway Investigation Work

Commented [DAS14]: We used the word "approximately." GMI wants to use the word "estimated." Not an issue in my mind.

Commented [DAS15]: Not the purpose of the FYR.

Commented [DAS16]: Is this relevant to evaluating the protectiveness of the GMI remedy?

Commented [DAS17]: Not a significant change.

Commented [DAS18]: This does not change the accuracy of what has been written.

Commented [DAS19]: Again with the work plan... See our response comment 2 above.

Commented [DAS20]: ok

Commented [DAS21]: Again with the work plan... See our response comment 2 above.

Plan as necessary to identify and evaluate response action alternatives as may be necessary to mitigate the potential vapor intrusion pathway and reduce VOC concentrations in soil, soil gas and groundwater.

Section VI. Five-Year Review Process

Page 16, Section VI.2, third paragraph, second sentence: This sentence should be worded, "In an MPCA response letter, MPCA summarizes historical (Barr, 2001) sampling events, which did not find TCE soil contamination that justified soil removal. In addition, more recent sampling (Barr, 2014a) found no TCE contamination in the upper 30 feet within the former absorption pit."

Commented [DAS22]: I'm confused. But once again it's pertaining to the wp. See our response comment 2 above.

Page 17, Section VI.3 – The Draft FYR states the primary documents reviewed include the Consent Order, the previous FYR reports, and Annual Long-Term Monitoring Reports. For a more accurate evaluation of the protectiveness of the response action and thus a more meaningful five-year review of the remedy, more full consideration should be given to the RAP Modification # 1, including the Work Plan, and existing data pointing to the existence of other sources of VOC contamination in groundwater in the vicinity of the Site.

Commented [DAS23]: I don't see where this significantly changes the accuracy of the original statement.

Page 19, Section VI.4.3, first paragraph: Prior to the most recent Work Plan, there were 7 existing pump-out wells and 16 existing monitoring wells. Pursuant to the Work Plan, 38 additional monitoring wells are being installed.

Commented [DAS24]: We prefer to focus on the work that has been completed with data as part of the record. Not on work that is proposed to be completed and the complete results are not yet known. See our response comment 2 above.

Page 22, Section VI.5, third bullet: We suggest it would be appropriate to delete the sentence stating that vapor intrusion assessment activities should evaluate whether pump-out and treatment system or other actions will enhance existing vapor mitigation activities. This sentence should be deleted because the draft FYR itself states several times that its scope does not include a review or evaluation of the vapor intrusion issue. This sentence is inconsistent with that principle. Second, as mentioned, the RAP Modification #1 provides for a Feasibility Study to identify and evaluate potential remedial actions, determined to be necessary, if any, to address the potential vapor pathway.

Commented [DAS25]: Again with the work plan...See our response comment 2 above.

Section VII Technical Assessment

Page 24, Section VII.1.4, second paragraph, last sentence: The statement recommending vertical characterization of the deeper (greater than 15 ft bgs) soil and groundwater fails to take into account the on-site Disposal Area investigation conducted in April 2014,⁴ which included four borings advanced to refusal or the uppermost confining layer. Soil and groundwater samples were taken at depths based on field screening measurements and at the top of the confining layer. Low concentrations (near laboratory reporting limits) of TCE were measured in soil samples collected from the top of the confining clay till layer in the four boring locations. TCE was detected at less than 1 mg/kg in the soil sample collected directly above the Decorah Shale in boring DP-056. No TCE was detected above the laboratory reporting limit in the soil samples collected from boring DP-054. Groundwater samples were collected at just above the clay till layer at approximately 40 feet bgs from each general location, and at boring DP-054 between 28-30 feet bgs and at boring DP-056 at 52.5 feet bgs. TCE concentrations from below the water table ranged from 99.5 to 425 ug/L. Additional on-site boring data has been obtained as part of the Work Plan implementation. Sampling from 12 boring locations on-Site showed levels of TCE below the water table ranging from below laboratory reporting limits (less than 0.40 ug/L) to 629 ug/L. This data confirms that the property at 2010 East Hennepin is not a continuing source of TCE in shallow groundwater in the vicinity of the Site, as acknowledged on page 4 of the draft FYR.

Commented [DAS26]: Don't agree. We are just stating that response actions pertaining to VI will be based on the data. We are not making a conclusion about the protectiveness of the VI remedy.

Page 25, Section VII.2.1, last paragraph: Close the quotation after "To Be Considered."

Commented [DAS27]: What about area outside the disposal pit area?

Commented [DAS28]: ok

⁴ These results are documented in the Disposal Area Investigation Results, Barr Engineering Co., May 23, 2014.

Page 27, Section VII.2.5, the second paragraph: The statement that "many homes ...are affected by vapor intrusion..." is incorrect and unsupported by Site data. Although it is accurate to say the *potential* for vapor intrusion in the East Hennepin area exists, the data does not support a statement that many homes are affected by vapor intrusion into indoor air. In fact, of the numerous indoor air samples taken to date, only one property has had a pre-mitigation sampling result above the ISV for TCE where the multiple lines of evidence did not point clearly to other sources. Even that home had evidence of numerous potential indoor air sources (e.g., hundreds of containers with household and laboratory chemicals).

Commented [DAS29]: How many homes have had subslab detections?

Page 27, Section VII.2.5, third paragraph: Insert "source" after the word, "potential" in the third from last line.

Commented [DAS30]: ok

Page 28, Section VII.2.5 Table 4: It is inaccurate to characterize the "new" Target Levels in this table as "cleanup levels" based on toxicity value. For air, EPA, MPCA and MDH refer to those levels as "screening levels."

Commented [DAS31]: Screening levels equal to levels we would deem sufficient for no further response action would equal clean up levels.

In summary, for the FYR to be as complete and accurate as possible in its review of the remedy, we believe these issues warrant careful consideration. Again, thank you for the opportunity to provide these comments.

Larry Deeney
Senior Technical Leader
Global Safety & Environment

Cc: Hans Neve, MPCA
Tim Grape, MPCA
Mary Sands, Barr